air matters

Spring 2000 Wisconsin Department of Natural Resources ❖ Bureau of Air Management

The COLOR of Air Quality

By Anne Bogar, Bureau of Air Management

What if the air changed color as the air quality changed? Suppose the air was green when air quality was good, yellow when air quality was moderate, orange when air quality was unhealthy for sensitive groups or red when it was generally unhealthy? We might consider adjusting the amount of time we spent outside if we could see the air quality so clearly.

Our air doesn't change colors like this, but these colors are now being used on maps across the country to show ozone concentrations. Ozone maps show how ozone (or smog) changes concentrations and moves throughout a region. The colors on the maps and the ozone concentration ranges that they represent are consistent with the Air Quality Index (AQI) promulgated by the US Environmental Protection Agency (EPA) (see sidebar, page 3). State and local air agencies are required to use this AQI as a public health service. This AQI is replaces the Pollutant Standard Index (PSI) which you may be familiar with. The ozone maps are a new tool that conveys the AQI information with animated images based on real data.

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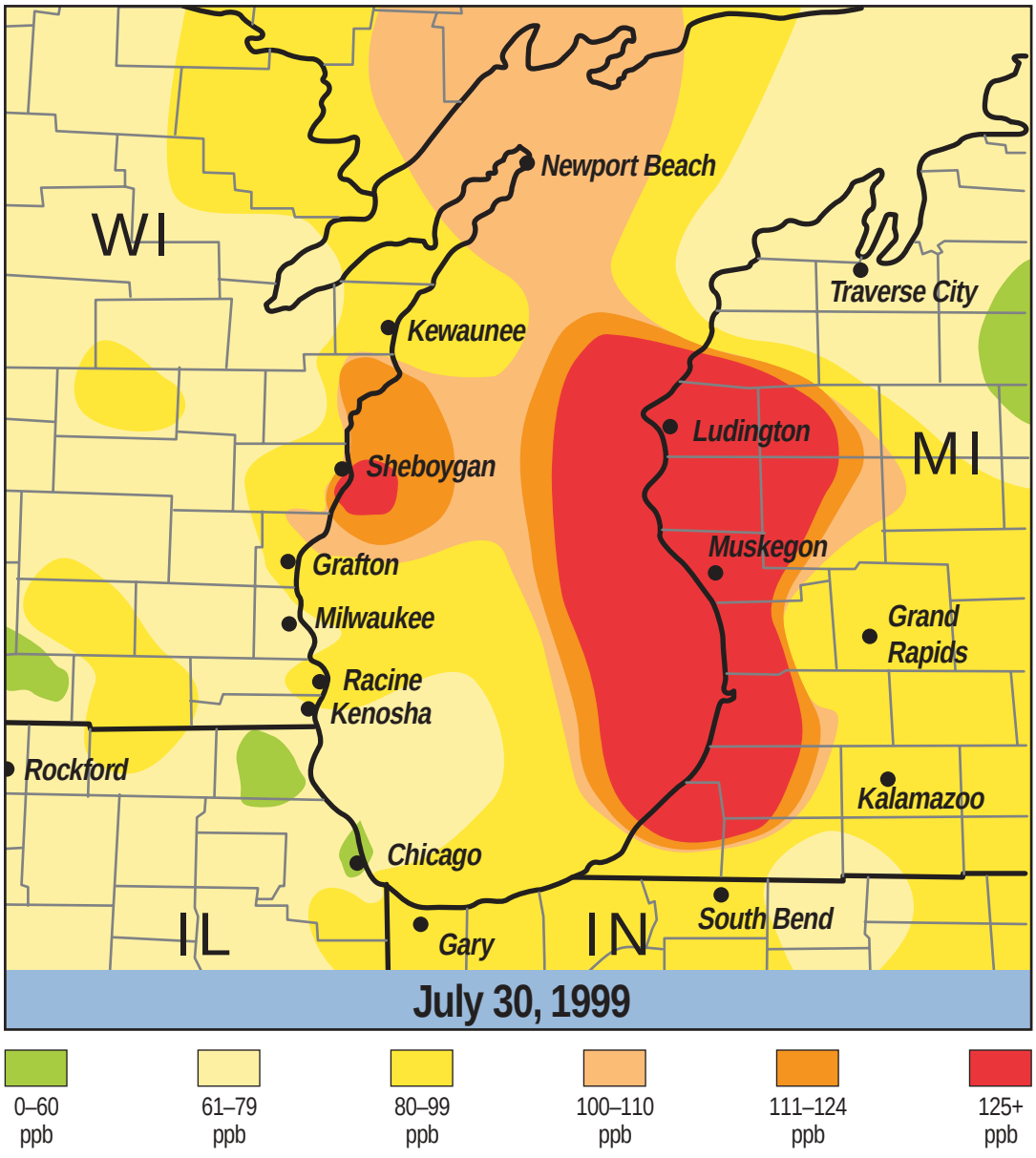

The ozone mapping system in action: this map shows one-hour peak ozone values in the Lake Michigan region on July 30, 1999.

Color of Air Quality
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Beginning in May 2000, *USA Today*, the national newspaper, and the Weather Channel, the cable weather station, now feature daily ozone maps and air quality descriptors for ozone levels across the country. The ozone maps, generated by EPA in partnership with state and local air quality agencies, use data collected from over 1,300 monitoring sites to create animated images of ozone concentrations and movement.

Milwaukee's television stations will also have access to ozone map programs, provided by their Weather Service Providers, which can be customized for their viewing audience. Weather Central, located in Madison, is one of the four Weather Service Providers in the country that can receive the gridded data to make the maps directly from EPA. Last summer, Weather Central worked with several TV stations outside of Wisconsin to refine its product. Weather Central is working with its Milwaukee television clients to get the product on the air this summer. All four Weather Service Providers have committed to providing this service free to their television clients.

Individuals can also find the ozone maps on the EPA's website, http://www.epa.gov/airnow/. The website contains maps for over 22 metropolitan areas or regions of the country. You may go directly to the EPA's website, or link to the site through the DNR's Air Program website at http://www.dnr.state.wi.us/org/aw/air/ozone/ozone.htm.

Using the ozone maps

For the Midwestern region, the website has an overview map of the Midwest states, and local maps for the states of Indiana, Minnesota and Ohio, the St. Louis area and the area around Lake Michigan (Chicago/Milwaukee). The best map for showing our area's ozone air quality is the Lake Michigan map. To get to this map, go to the home page of the Airnow website and click on the 2000 Ozone Maps button at the top. This will take you to a map of the United States with different regions highlighted in various colors. Click on any highlighted state in the Midwest region. This takes you to a page where the U.S. map has only the Midwest states highlighted. Click on "Midwest" below the map, to pull up the menu for the Midwest maps. Then click on Lake Michigan.

Once you have selected Lake Michigan, you can choose to view one of four map products: 1) an ozone animation ("movie") updated throughout the day showing today's ozone levels; 2) an ozone animation of yesterday's ozone levels; 3) a single-frame map of yesterday's peak 8-hour ozone concentration; and 4) a single-frame map of yesterday's peak 1-hour concentration. Select the map you want to see by clicking on the circle by the product and then clicking on the "See the Map" button. The maps will use different colors to represent the air quality based on the ozone concentrations. Green represents good, yellow means moderate, orange is unhealthy for sensitive populations, red means unhealthy, and purple means very unhealthy.

Ozone forecasts

The website also contains a forecast table for today's and tomorrow's predicted ozone levels for more than 90 metropolitan areas in the United States. Forecasts are included for six Wisconsin cities: Green Bay, Madison, Milwaukee, Oshkosh, Racine/Kenosha and Sheboygan. The forecasts will list an air quality descriptor (good, moderate, unhealthy for sensitive populations, unhealthy or very unhealthy) for today's and tomorrow's expected ozone concentrations. From the Airnow homepage, you may also choose to review archive maps (maps from past days) generated from throughout the ozone season (May–October.)

The ozone maps are an exciting new tool for sharing air quality information. Please check out the ozone map website, the Weather Channel and *USA Today* for regular updates. If you're in southeastern Wisconsin, watch for television coverage of the ozone maps. If your station is not using them, let them know you want to see them. This information is for you! ❖

Free Climate Change Publication Now Available

What is climate change? Why should you care about it? Will it cause your crops to wilt? Flood your summer cottage at Lake Namekagon? Cause disease-carrying insects to move into Wisconsin?

You'll find the answers to these questions and more in a new publication, "Warming Trends: What global climate change could mean for Wisconsin." First published in the April 2000 issue of the *Wisconsin Natural Resources* magazine, this illustrated, eight-page, full-color booklet is now available free. To get your copy, contact Anne Urbanski, phone 608-267-0573 or write to her at Wisconsin DNR, PO Box 7921- AM/7, Madison, WI, 53707-7921, or by email: ubana@dnr.state. wi.us. Ask for Publication AM-303-00. ❖

EPA's Air Quality Index

By Eva Larson,
DNR Southeast Region

The U.S. Environmental Protection Agency has developed the Air Quality Index, or AQI, (formerly known as the Pollutant Standards Index) for reporting monitored levels of ozone and other common air pollutants. The index makes it easier for the public to understand the health significance of air pollution levels.

Air quality is measured by a nationwide monitoring system that records concentrations of ozone and several other air pollutants at more than 1,000 locations across the country. EPA "translates" the pollutant concentrations to the [standard] AQI index, which ranges from 0 to 500. The higher the AQI value for a pollutant, the greater the health concern. An AQI value of 100 usually corresponds to the national ambient air quality standard (NAAQS) for the pollutant, meaning that pollutant concentrations have reached unhealthy levels. These standards are established by EPA under the Clean Air Act to protect public health and the environment.

To make it easier for the public to quickly determine the air quality in their communities, EPA has assigned a specific color to each AQI category. You will see the AQI for ozone reported in your newspaper, local television news, radio station, on EPA's AIRNOW website and on the Department of Natural Resources' Air Quality Index Hotline. This color scheme can help you quickly determine whether air pollutants are reaching unhealthy levels in your area. For example, the color orange means that conditions are "unhealthy for sensitive groups," the color red means that conditions are "unhealthy" for everyone, and so on.

For the latest air monitoring levels, call the DNR's AQI Hotline at 1-800-242-4727. For more information on protecting yourself from ozone pollution, call the American Lung Association at 1-800-LUNG-USA (1-800-586-4872), or visit their website at http://www.lungusa.org. Also, visit EPA's website at http://www.epa.gov/airnow for information on ozone mapping, the AQI, and more. ❖

FACT System Goes on the Web

by John Shenot,
DNR Bureau of Cooperative Environmental Assistance

The FACT System is a computer tool that extracts information from DNR databases to create summary reports about regulated facilities and their environmental releases. All that is needed to use the system is a web browser and an Internet connection. This makes it possible, for the first time ever, to conveniently retrieve up-to-date integrated reports on the waste generation, wastewater discharges, air emissions, and toxics releases of any Wisconsin facility on a single webpage.

The FACT System can be an excellent place to start if you want to see the "big picture" concerning an individual facility, a community, or a specific pollutant. For this reason, and because all of the information comes from non-confidential public records, DNR is implementing a plan that will make the FACT System available to the public via the Internet.

DNR has promised that no information about any facility will be included in the FACT System on the Internet until we can certify that the data are accurate. To make good on that promise, DNR initiated an extensive review process to verify the accuracy of the information in the system. In January 2000, DNR asked more than 9,300 Wisconsin facilities with data in the system if they wanted to review their facility data before the system is available on the Internet.

As of the date of publication of this article, the data review and adjustment process is ongoing. DNR began posting data in April 2000 for facilities that declined to review their data. After that, data will be posted as it becomes available for facilities that have completed the data review process. Due to the large number of review requests, it is not possible at this time to predict when all facilities will have their data reviewed.

For an overview of the FACT System, updated progress reports, and other related information, visit our web page at http://www.dnr.state.wi.us/org/caer/cea/projects/one_stop/updates/fact.htm. Please send any questions, comments, criticism, or suggestions to John Shenot, phone 608-267-0802, e-mail shenoj@dnr.state.wi.us. ❖

Air Rules Update and Calendar

Please visit our webpage, http://www.dnr.state.wi.us/org/aw/air/reg/calendar.htm, for the most up-to-date information on proposed rules.

This 4-page edition of *Air Matters* is printed in full color in order to accurately portray the color scheme of the Air Quality Index. We will return to our usual 8-page format and print color scheme in the next issue.

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